## Claims:

5

10

15

20

25

30

- 1. A thermoplastic resin composition comprising at least 80% of a reaction product resulting from the melt mixing of;
  - A) a nylon thermoplastic resin, and
  - B) a siloxane modified amide having the formula;

$$R^1$$
  $R^2$ 

| | |
-[C(O)-X-[SiO]<sub>DP</sub>Si-X-C(O)NH-Y-NH]<sub>n</sub>-

| | |
 $R^3$   $R^4$ 

where,

- (1) DP (degree of polymerization) is 1-700,
- (2) n is 1-500,
- (3) X is a linear or branched chain alkylene having 1-30 carbons,
- (4) Y is a linear or branched chain alkylene having 1-40 carbons, wherein,
- (a) the alkylene group may optionally and additionally contain in the alkylene portion at least one of (i) 1-3 amide linkages; (ii) a C5 or C6 cycloalkane; or (iii) phenylene, optionally substituted by 1-3 members which are independently C1-C3 alkyls;
- (b) the alkylene group itself may optionally be substituted by at least one of (i) hydroxy; (ii) a C3-C8 cycloalkane; (iii) 1-3 members which are independently C1-C3 alkyls; phenyl, optionally substituted by 1-3 members which are independently C1-C3 alkyls; (iv) a C1-C3 alkyl hydroxy; or (v) a C1-C6 alkyl amine;
- (c) Y can be Z where Z is  $T(R^{20})(R^{21})(R^{22})$  where  $R^{20}$ ,  $R^{21}$  and  $R^{22}$  are each independently linear or branched C1-C10 alkylenes; and T is CR in which R is hydrogen, the group defined for  $R^{1}$ - $R^{4}$ , or a trivalent atom such as N, P and Al;

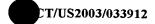
5

15

20

25

30



- (5) each of R<sup>1</sup>-R<sup>4</sup> is independently methyl, ethyl, propyl, isopropyl, a siloxane chain, or phenyl, wherein the phenyl may optionally be substituted by 1-3 members, which are methyl or ethyl; and
- (6) X, Y, DP, and R<sup>1</sup>-R<sup>4</sup> may be the same or different for each polyamide unit.
- 2. The thermoplastic resin composition of claim 1 wherein 0.5 to 20 weight parts of B) is used per 100 weight parts of A).
- 3. The thermoplastic resin composition of claim 1 wherein 20 to 50 weight parts of B) is used per 100 weight parts of A).
  - 4. The thermoplastic resin composition of claim 1 wherein the nylon thermoplastic resin is selected from the group of nylon 6, nylon 6/6, nylon 6/12 nylon 12, and mixtures thereof.
  - 5. A process for preparing a thermoplastic resin composition comprising melt mixing;
    - A) a nylon thermoplastic resin, and
    - B) a siloxane modified amide having the formula;

$$R^1$$
  $R^2$ 
 $I$   $I$ 
 $-[C(O)-X-[SiO]_{DP}Si-X-C(O)NH-Y-NH]_n$ 
 $I$   $I$ 
 $R^3$   $R^4$ 

where,

- (1) DP (degree of polymerization) is 1-700,
- (2) n is 1-500,
- (3) X is a linear or branched chain alkylene having 1-30 carbons,
- (4) Y is a linear or branched chain alkylene having 1-40 carbons, wherein,
- (a) the alkylene group may optionally and additionally contain in the alkylene portion at least one of (i) 1-3 amide linkages; (ii) a C5 or C6

5

10

15

cycloalkane; or (iii) phenylene, optionally substituted by 1-3 members which are independently C1-C3 alkyls;

- (b) the alkylene group itself may optionally be substituted by at least one of (i) hydroxy; (ii) a C3-C8 cycloalkane; (iii) 1-3 members which are independently C1-C3 alkyls; phenyl, optionally substituted by 1-3 members which are independently C1-C3 alkyls; (iv) a C1-C3 alkyl hydroxy; or (v) a C1-C6 alkyl amine;
- (c) Y can be Z where Z is  $T(R^{20})(R^{21})(R^{22})$  where  $R^{20}$ ,  $R^{21}$  and  $R^{22}$  are each independently linear or branched C1-C10 alkylenes; and T is CR in which R is hydrogen, the group defined for  $R^1$ - $R^4$ , or a trivalent atom such as N, P and Al;
- (5) each of R<sup>1</sup>-R<sup>4</sup> is independently methyl, ethyl, propyl, isopropyl, a siloxane chain, or phenyl, wherein the phenyl may optionally be substituted by 1-3 members, which are methyl or ethyl; and
- (6) X, Y, DP, and R<sup>1</sup>-R<sup>4</sup> may be the same or different for each polyamide unit.

wherein the thermoplastic resin composition contains at least 80 weight percent of A) and B).

- 20 6. An article of manufacture comprising the composition of claim 1.
  - 7. An article of manufacture comprising a sheet product made from the composition of claim 1.
- 8. An article of manufacture comprising a molded article made from the composition of claim 1.
  - 9. An article of manufacture comprising a fiber made from the composition of claim 1.
- 30 10. An article of manufacture in accordance with claim 9 comprising a nonwoven fabric made from said fiber.

- 11. An article of manufacture in accordance with claim 9 comprising a spun yarn made from said fiber.
- 12. An article of manufacture in accordance with claim 11 comprising a textile woven fromsaid spun yarn.